IN THE CLAIMS

Please amend claims 51 and 68 and add new claims 70, 71 and 72 as follows, all without prejudice or disclaimer.

1-50. (Cancelled)

51. (Currently Amended) A diffraction-based assay device for detecting the presence of an analyte, the device comprising:

a substrate that comprises a polymer film ~~and an optional metal coating~~, wherein a binder is present on the substrate in a pattern;

a fluidic guide that is in direct communication with the substrate, wherein the fluidic guide defines an opening therein and includes at least one channel through which a fluid test sample is capable of flowing via capillary action;

a wicking agent that is capable of receiving the fluid test sample from the fluidic guide and thereafter facilitating contact of the fluid sample with the binder on the substrate; and

an electromagnetic radiation source that is configured to direct electromagnetic radiation to the substrate through the opening for generating a diffraction pattern proximate an area of the substrate defined by the opening.

52. (Previously Presented) The diffraction-based device of claim 51, wherein the electromagnetic radiation is capable of passing through the fluidic guide to the substrate.

53. (Previously Presented) The diffraction-based device of claim 51, wherein the device further comprises an opening that permits the passage of the electromagnetic radiation to the substrate.

54. (Previously Presented) The diffraction-based device of claim 51, wherein the wicking agent defines an opening through which the electromagnetic radiation is capable of passing.

55. (Previously Presented) The diffraction-based device of claim 51, wherein a second binder is also present on the substrate.

56. (Previously Presented) The diffraction-based device of claim 51, wherein the channel includes an interior passage defined between a first opening and a second opening, the first opening being capable of receiving the fluid sample.

57. (Previously Presented) The diffraction-based device of claim 56, wherein the first opening is beveled.

58. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide is generally linear.

59. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide has one or more turns or branches.

60. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide is positioned generally perpendicular to the substrate.

61. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide is in communication with a well, the well initially receiving the fluid sample.

62. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide is positioned directly adjacent to the wicking agent.

63. (Previously Presented) The diffraction-based device of claim 51, wherein the substrate comprises the metal coating.

64. (Previously Presented) The diffraction-based device of claim 51, wherein the fluidic guide contains a material that has an affinity for the fluid sample that is greater than the affinity of the fluid sample to the source from which the sample is obtained.

65. (Previously Presented) The diffraction-based device of claim 51, further comprising a detector for detecting the diffraction pattern.

66. (Previously Presented) The diffraction-based device of claim 51, wherein the diffraction pattern is generated only upon exposure of the substrate to the analyte.

67. (Previously Presented) The diffraction-based device of claim 51, wherein the polymer film is generally transparent to the electromagnetic radiation.

68. (Currently Amended) A diffraction-based assay device for detecting the presence of an analyte, the device comprising:

a substrate that comprises a polymer film ~~and an optional metal coating~~, wherein a binder is present on the substrate in a pattern;

a fluidic guide that is in direct communication with the substrate, wherein the fluidic guide defines an opening therein and includes at least one channel through which a fluid test sample is capable of flowing via capillary action;

means for venting pressure to facilitate movement of the fluid test sample in a direction of the substrate;

a wicking agent that is capable of receiving the fluid test sample from the fluidic guide and thereafter facilitating contact of the fluid sample with the binder on the substrate; and

an electromagnetic radiation source that is configured to direct electromagnetic radiation to the substrate through the opening for generating a diffraction pattern proximate an area of the substrate defined by the opening.

69. (Previously Presented) The diffraction based device of Claim 68, wherein the means for venting pressure is a pressure vent disposed proximate the wicking agent in communication with the wicking agent and external atmosphere.

70. (New) The diffraction-based device of claim 68, wherein the substrate further comprises a metal coating.

71. (New) The diffraction-based device of claim 51, wherein the substrate further comprises a metal coating.

72. (New) A diffraction-based assay device for detecting the presence of an analyte, the device comprising:

a substrate that comprises a polymer film, wherein a binder is present on the substrate in a pattern;

a fluidic guide that is in direct communication with the substrate, wherein the fluidic guide includes at least one channel through which a fluid test sample is capable of flowing via capillary action;

a wicking agent defining a hole therethrough and capable of receiving the fluid test sample from the fluidic guide and thereafter facilitating contact of the fluid sample with the binder on the substrate; and

an electromagnetic radiation source that is configured to direct electromagnetic radiation to the substrate through the hole for generating a diffraction pattern proximate an area of the substrate defined by the hole.